

⁽¹²⁾ UK Patent Application ⁽¹⁹⁾ GB ⁽¹¹⁾ 2 225 716 ⁽¹³⁾ A

(43) Date of A publication 13.06.1990

(21) Application No 8922723.5

(22) Date of filing 09.10.1989

(30) Priority data

(31) 8823945

(32) 12.10.1988

(S3) G2

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(51) INT CL⁴

A47C 21/08

(52) UK CL (Edition K)

A4L LBES L1004 L1006 L101 L105 L150 L305
U1S S1207

(56) Documents cited

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(58) Field of search

UK CL (Edition J) A4L LAKA LAKF LBES
INT CL⁴ A47C 21/08

(54) Collapsible non-slipping bed guard

(57) A bed guard 10 comprises a panel 12 which is supported beside a bed in use by projection means 18. The or each projection means 18 is arranged to fit between the mattress and the bed base, and has adjustable retaining means 23, 24 which engages either with an edge of the mattress or with an edge of the bed base to prevent slippage. In the embodiment described, the or each projection means 18 is movable relative to the panel 12 between an extended operative position and a collapsed inoperative position (as shown in figure 1 by solid lines and dotted lines respectively).

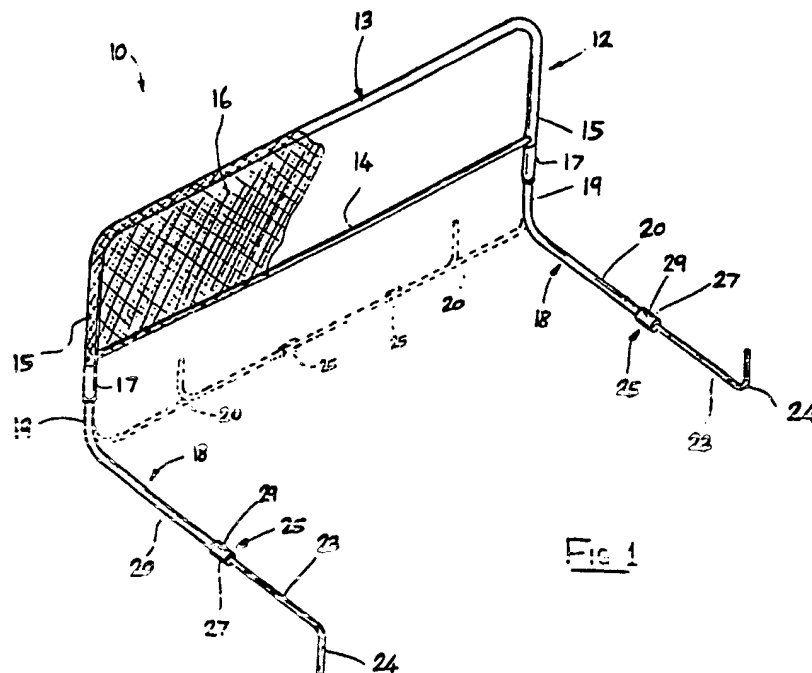


Fig. 1

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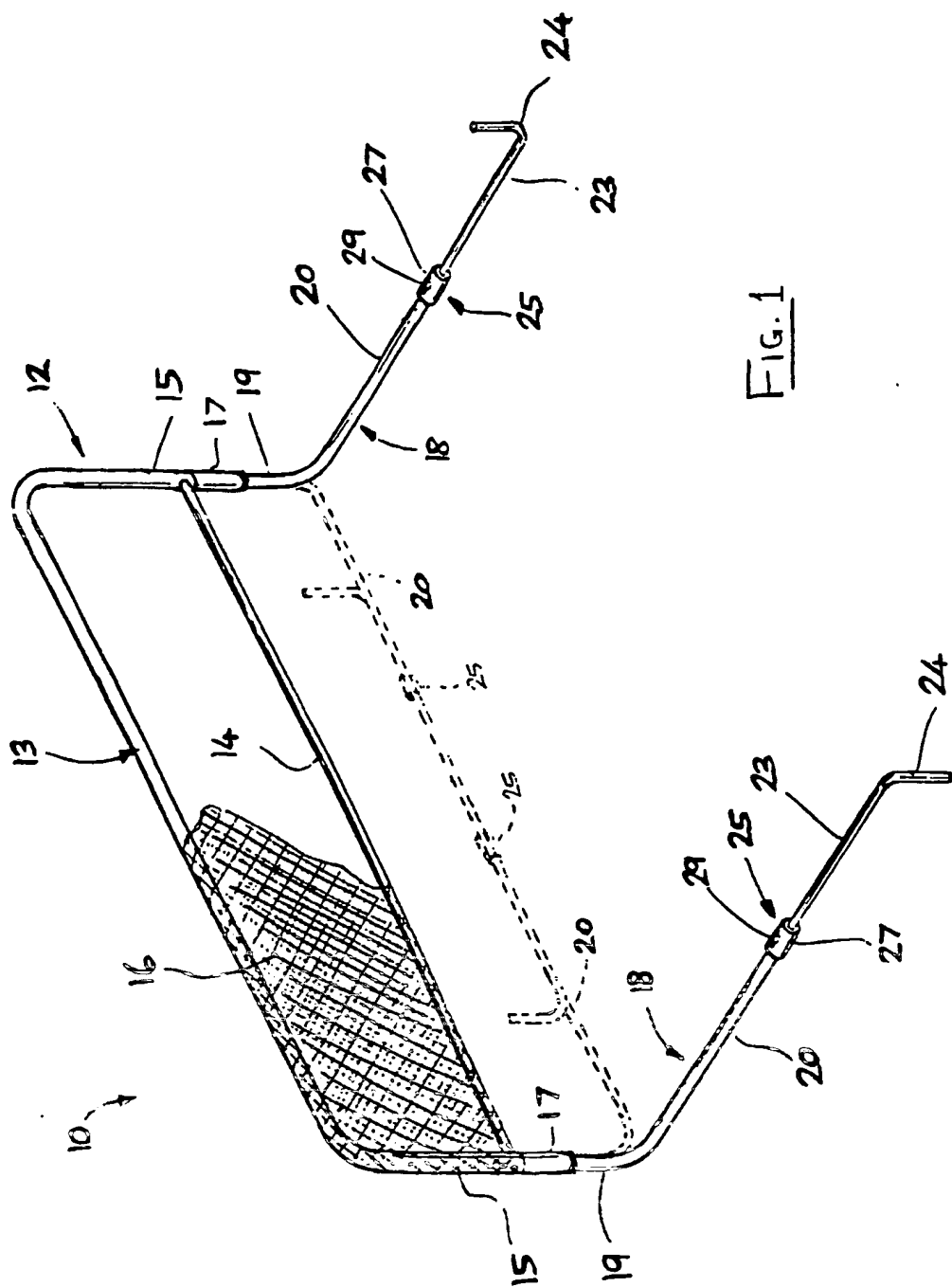


FIG. 1

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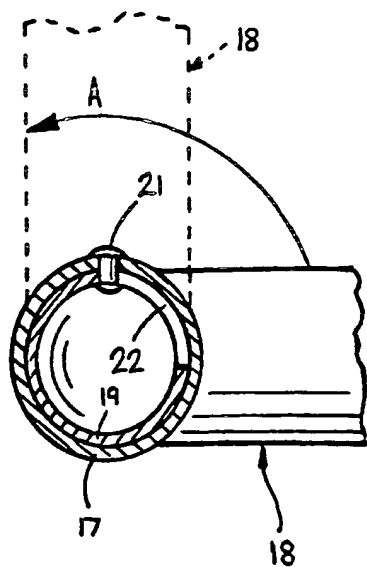


FIG. 2

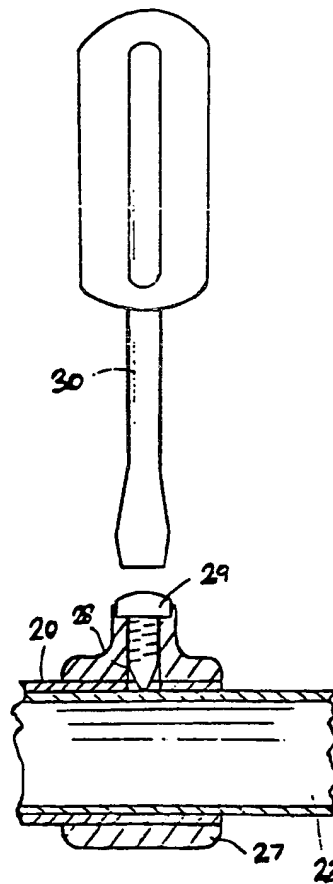


FIG. 3

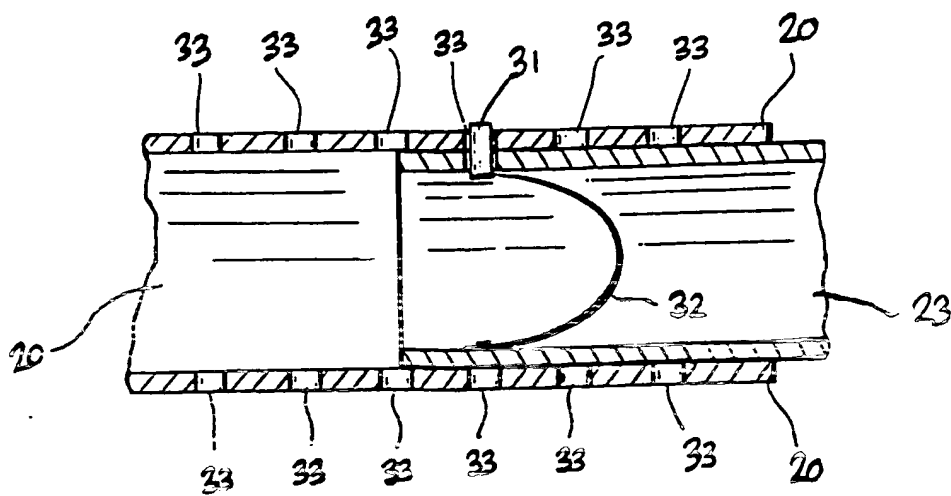


FIG. 4

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BED GUARD

5 This invention relates to bed guards, more particularly, though not exclusively, to bed guards for preventing young children or infirm persons falling out of a bed.

10 Bed guards typically comprise a guard member which is positioned in use beside a bed to act as a barrier. In a known bed guard, the guard member is a panel that can be located in an appropriate position by projecting means arranged to be inserted between the mattress and the bed base. The arrangement is such
15 that the bed guard is retained in position by the weight of the mattress and, when a person rests upon the mattress, by the weight of that person.

20 Bed guards such as that described above suffer from the disadvantage that the projecting means may be displaced by movement of a person lying upon the bed. This may cause the guard member to slip out of its correct position and to move away from the bed, thereby leaving a gap through which the occupant of
25 the bed could fall. This disadvantage is particularly marked where the mattress is filled with foam or is of similarly lightweight construction.

30 Another disadvantage of known bed guards is their bulk, which reduces portability and makes storage difficult.

The principal object of this invention is to provide a
35 bed guard which overcomes, or at least mitigates, the aforesaid disadvantages.

With this object in view and in accordance with one aspect of this invention, a bed guard comprises a guard member for positioning in use beside a bed, projection means arranged to be inserted in use
5 between a bed mattress and a bed base, and retaining means associated with the projection means for positively retaining the guard member in position beside the bed.

10 When the bed guard is in use, the guard member is held firmly in position by the retaining means and, in particular, will not slip dangerously away from the bed.

15 In a preferred embodiment of the invention, the or each retaining means comprises a retaining member having a hook-like portion which engages in use either with an edge of the mattress or with an edge of the bed base to hold the bed guard in position.

20 Preferably, the projection means comprises two or more projecting arms, each projecting arm having a retaining member at its end. It is advantageous for each retaining member to be movable with respect to
25 its associated projecting arm. For instance, each retaining member can be movable longitudinally to cater for bed bases and mattresses of varying widths. Moreover, each retaining member can be turned about the longitudinal axis of the projecting arm so that
30 the hook-like portion can engage either with an edge of the mattress or, alternatively, with an edge of the bed base, depending upon which arrangement may be desired.

35 It is preferred that securing means are provided to hold the retaining member in any desired position with respect to the projecting arm. The securing means may

be of any appropriate type, provided that it fixes the respective parts securely in relation to one another whilst allowing the retaining member to be moved whenever adjustment is desired.

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In a preferred embodiment of this invention, the projection means is movable relative to the guard member between an extended operative position and a collapsed inoperative position. This makes the bed guard easy to carry and to store when not in use.

10

Stop means may be provided to limit the range of movement of the projection means. Conveniently, the stop means is arranged to prevent movement of the projection means beyond a position substantially perpendicular to the plane of the guard member.

15

In order that the invention may be more readily understood, reference will now be made, by way of example only, to the accompanying drawings in which:

20

Figure 1 is a perspective view of a bed guard constructed in accordance with this invention;

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Figure 2 is a sectional view to an enlarged scale, showing a detail of Figure 1;

Figure 3 is a sectional detail view to an enlarged scale, showing one form of securing means, and;

30

Figure 4 is a detail view showing another form of securing means.

35

In Figure 1, a bed guard 10 comprises a guard member in the form of a panel 12 having a U-shaped tubular frame member 13. A reinforcing tubular frame member 14 extends between the arms 15 of the frame member 13 and

is secured thereto by bolts, rivets, welding or other fixing means. The tubular frame members 13,14 are preferably of steel or aluminium material and are suitably coated with paint or a plastics material.

5

The panel 12 is completed by an elastic mesh 16, preferably of synthetic fabric, which has peripheral channels through which the tubular frame members 13, 14 extend to hold the mesh 16 in a stretched configuration. The mesh 16 provides a cushioning effect, with benefit to safety.

10

The arms 15 of the frame member 13 are extended into tubular extensions 17, which form sockets for projection means in the form of tubular members 18. Each tubular member 18 has an end portion 19 angled through 90 degrees, and a projecting arm 20. The end portion 19 is received within its associated tubular extension 17. In use, the respective projecting arms 20 extend perpendicularly to the panel 12 and are inserted between a mattress and a bed base to support the panel 12 in position beside the bed.

15

20

An important feature of the bed guard 10 is that the tubular members 18 are movable relative to the respective tubular extensions 17, such that the projecting arms 20 can be hinged into the plane of the panel 12 when not in use, as shown by the dotted lines in Figure 1. This makes the bed guard 10 more compact and therefore easier to carry and to store than existing devices.

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30

Figure 2 shows the hinging mechanism in cross-sectional detail. In this Figure, the end portion 19 of each tubular member 18 is secured within its associated extension 17 by means of a rivet 21 extending through the wall of the extension 17 and

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through the wall of the end portion 19. The rivet 21 is received in a slot 22 extending for just over 90 degrees around the wall of the end portion 19, whereby movement of the tubular member 18 relative to the tubular extension 17 is restricted to 90 degrees as shown by the arrow A and dotted lines in Figure 2.

In order to ensure that the bed guard 10 cannot be displaced into an unsafe position, the respective projecting arms 20 are each provided with tubular retaining members 23. Conveniently, each retaining member 23 is formed from a tube of narrower section than the tube forming the projecting arms 20, such that the retaining member 23 is received by its associated projecting arm 20 in telescopic fashion. The end of each retaining member 23 is angled through 90 degrees to form a hook-like portion 24.

The retaining members 23 are movable relative to the projecting arms 20 in two senses. Firstly, each retaining member 23 can be extended or retracted by telescopic movement so as to adjust the bed guard 10 to suit different bed widths. Secondly, each retaining member 23 can be turned through 360 degrees about the longitudinal axis of its associated projecting arm 20. Thus, the hook-like portion 24 can depend downwardly as shown by the left-hand portion 24a to engage with an edge of the bed base, which is preferred, or can extend upwardly as shown by the right-hand portion 24b to engage with an edge of the mattress.

Securing means 25 are provided to lock the retaining members 23 in a desired position with respect to the projecting arms 20. In the embodiment illustrated,

each securing means 25 comprises a bush 27 of plastics or other suitable material, such as metal.

5 As best shown in the detail view of Figure 3, each bush 27 is fixed to the free end of a projecting arm 20. The bush 27 has a radially-extending bore 28 within which a screw 29 is threadedly engaged. The bore 28 extends through the wall of the projecting arm 20 such that the end of the screw 29 can contact the
10 outer wall of the retaining member 23 received within the projecting arm 20. Consequently, when the screw 29 is tightened by a screwdriver 30 or by other suitable means such as a coin, the end of the screw 29 jams the retaining member 23 and thus prevents
15 movement thereof relative to the projecting arm 20.

In a variant of the arrangement shown in Figure 3, the screw 29 may be replaced by a thumb screw so that a screwdriver or the like is not required.

20 Another possible securing means is illustrated in Figure 4 and comprises a movable locking pin 31 associated with the retaining member 23. The locking pin 31 is biased outwardly by a spring 32 to engage in
25 any of an array of holes 33 provided in the wall of the projecting arm 20. The holes 33 are longitudinally and angularly spaced from one another to define a series of lock positions for the retaining member 23. When it is desired to move the retaining
30 member 23 from one lock position to another, the locking pin 31 may be pressed in the manner of a button to disengage from a hole 33, thereby allowing the retaining member 23 to be moved telescopically, or turned, until the pin 31 engages in another hole 33.

35 As will be clear to those skilled in the art, the bed guard 10 of this invention is considerably more secure

than previously known designs. The bed guard 10 is also easier to carry and to store than prior art devices.

5 It will also be clear that this invention is not limited to the preferred embodiments described herein but includes all modifications and variants falling within its scope. For instance, other types of
10 securing means may be used, such as a plastic or a metal collet type fixing. Moreover, the mesh of the panel 12 may be replaced by a solid panel member or by a plurality of rails.

CLAIMS

- 5 1. A bed guard comprising a guard member for positioning in use beside a bed, projection means for insertion in use between a bed mattress and a bed base, and retaining means associated with the projection means for positively retaining the guard member in position beside the bed.
- 10 2. A bed guard according to claim 1, wherein the retaining means comprises a retaining member having a hook-like portion.
- 15 3. A bed guard according to claim 1 or claim 2, wherein the retaining means is movable relative to a projecting arm, the projecting arm being part of the projection means.
- 20 4. A bed guard according to claim 3, wherein the retaining means can be moved relative to the projection means to adjust the bed guard to suit beds of varying widths.
- 25 5. A bed guard according to claim 4, wherein the retaining means is movable parallel to the longitudinal axis of the projecting arm.
- 30 6. A bed guard according to any of claims 3 to 5, wherein the retaining means can be moved relative to the projection means to engage either with an edge of the mattress or with an edge of the bed base.
- 35 7. A bed guard according to claim 6, wherein the retaining means can be turned about the longitudinal axis of the projecting arm.

8. A bed guard according to any of claims 3 to 7, having securing means operable to hold the retaining means in a fixed position relative to the projection means.

5

9. A bed guard according to claim 8, wherein the securing means comprises a screw clamp.

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10. A bed guard according to claim 8, wherein the securing means comprises a pin which is engageable in any one of an array of recesses or holes, each recess or hole being positioned to define an individual lock position.

15

11. A bed guard according to any preceding claim, wherein the projection means is movable relative to the guard member between an extended operative position and a collapsed inoperative position.

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12. A bed guard according to claim 11, having stop means arranged to limit the range of movement of the projection means with respect to the guard member.

25

13. A bed guard according to any preceding claim, wherein the guard member, the projection means and the retaining means each comprise tubular members.

30

14. A bed guard according to claim 13, wherein the guard member is linked to the projection means, and the projection means is linked to the retaining means, by telescopic interconnection between the respective tubular members.

35

15. A bed guard according to any preceding claim, wherein the guard member comprises a peripheral frame which supports an elasticated mesh.

16. A bed guard according to any preceding claim, wherein the guard member comprises an elongate panel having a projecting arm associated with each end.

- 5 17. A bed guard substantially as hereinbefore described with reference to, and as illustrated in, the accompanying drawings.

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